

west virginia department of environmental protection

Division of Air Quality 601 57th Street, SE Charleston, WV 25304

Phone: (304) 926-0475 • Fax: (304) 926-0479

Joe Manchin III, Governor Randy C. Huffman, Cabinet Secretary www.wvdep.org

ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: R13-2471B D - R - A - F - T 8/9/10

Plant ID No.: 047-00006

Applicant: Litwar Processing Company, LLC

Facility Name: Litwar Preparation Plant

Location: Iaeger, McDowell County, WV

SIC Code: 1221 (Bituminous Coal & Lignite - Surface)

1222 (Bituminous Coal & Lignite - Underground)

Application Type: Modification

Received Date: 3/23/10 Engineer Assigned: Dan Roberts

Fee Amount: \$2,000 Date Received: 3/26/10 Complete Date: 8/6/10 Applicant's Ad Date: 6/9/10

Newspaper: The Industrial News

UTM's: Easting: 425.39 km Northing: 4149.03 km Zone: 17

Description: Addition of a single deck stationary coal screen SC-1 and associated

conveyor BC-19 with maximum throughputs of 700 TPH and 5,000,000

TPY.

BACKGROUND

Litwar Processing Company, LLC ("Litwar") proposes to modify their existing wet wash coal preparation plant and railcar loadout facility located near Iaeger, McDowell County, WV. Permit R13-2471B will supercede and replace Permit R13-2471A approved on August 7, 2007. In application R13-2471B, Litwar proposes to add single deck stationary coal screen SC-1 and associated conveyor BC-19 with maximum throughputs of 700 TPH and 5,000,000 TPY.

Litwar's existing wet wash coal preparation plant and railcar loadout facility was originally issued After-the-Fact construction permit R13-2471 approved on May 20, 2002. The facility had been built in 1980.

Litwar was issued temporary permit R13-2629X on June 29, 2005 for a portable crushing unit with maximum rated throughputs of 300 TPH and 2,630,000 TPY. The portable crushing unit would crush raw coal and consist of a 15 ton hopper, two conveyors and a crusher.

Litwar was issued modification permit R13-2471A on August 7, 2007. This modification incorporated the portable crushing unit permitted under temporary permit R13-2629X and to add two new belt conveyors, increase throughput, modify a transfer point control device, remove a mine belt conveyor and add a mine belt conveyor. Permit R13-2471A superceded and replaced permits R13-2471 and R13-2629X.

DESCRIPTION OF PROCESS

Raw coal is trucked onto the site and dumped to one of the open stockpiles OS-1 through OS-7. From stockpile OS-7, An endloader transfers raw coal to the portable crushing unit hopper, which feeds conveyor BC-1A. Conveyor BC-1A transfers raw coal to crusher PC-1, which crushes the raw coal from 6" x 0 to 2" x 0 and then drops it to conveyor BC-2A. Conveyor BC-2A transfers the sized raw coal to back to stockpile OS-7. This direct ship sized raw coal is reclaimed from stockpile OS-7 to trucks for shipment to one of the raw coal truck dumps for direct shipment by railcar. The raw coal is reclaimed from the open stockpiles OS-1 through OS-6 via an endloader and loaded back to trucks and transported to one of the truck dump bins BS-1, BS-2 or BS-3.

From truck dump bin BS-1, raw coal drops to conveyor BC-2, which transfers it to bin BS-7 and then onto conveyor BC-4. From truck dump BS-2, raw coal drops to conveyor BC-2, which transfers it to bin BS-6 and then onto conveyor BC-4 or to conveyor BC-18 and into bin BS-7 and then onto conveyor BC-4, or conveyor BC-17, which transfers it to bin BS-4 and then onto conveyor BC-4. From truck dump BS-3, raw coal drops to conveyor BC-3, which transfers it to bin BS-5 and then onto conveyor BC-4 or to conveyor BC-18 and into bin BS-7 and then onto conveyor BC-4.

Raw coal is also delivered via railcar into railcar shakeout bin BS-13, which feeds conveyor BC-14, conveyor BC-15 and bin BS-4, which then feeds it onto conveyor BC-4.

Conveyor BC-4 transfers raw coal to new screen SC-1, which transfers the oversize to crusher CR-1 and then onto conveyor BC-5 and the undersize to new conveyor BC-19 and then onto conveyor BC-5. Conveyor BC-5 feeds the raw coal to the wet wash preparation plant.

Clean coal from the wet wash preparation plant is fed to conveyor BC-8, which transfers it to conveyor BC-9 or conveyor BC-12. Conveyor BC-9 transfers the clean coal to storage silo BS-10 or conveyor BC-10 which feeds storage silo BS-11. Storage silos BS-10 and BS-11 drop the clean coal to conveyor BC-11, which transfers it to conveyor BC-12. Conveyor BC-12 transfers the clean coal to railcar loadout bin BS-12.

Clean or direct ship coal is also trucked to the facility and dumped into open storage pile OS-8 or dump bin BS-14. Endloaders transfer the coal from open storage pile OS-8 to bin BS-14 too,

which feeds it to conveyor BC-16 and then to conveyor BC-13 which feeds railcar loadout bin BS-12.

Refuse from crusher CR-1 drops to conveyor BC-6 and is transferred to conveyor BC-7. Refuse from the wet wash preparation plant also drops to conveyor BC-7. Lime bin BS-8 adds lime to the refuse traveling on conveyor BC-7 to hopper BS-9, which loads it to trucks or drops to open storage pile OS-9.

The facility shall be modified and operated in accordance with the following equipment and control device information taken from permit applications R13-2471B, R13-2471A, R13-2629X, and R13-2471 and any amendments thereto:

Equipment ID #	Date of Construction, Re-Construction or Modification			Design Capacity	
		Emission Unit Description	ТРН	TPY	Control Device(s) ¹
		Remote Raw Coal Stockpiles			
OS-1 (31S)	C 1980	Raw Coal Open Storage Pile - 8,650 ton maximum - receives raw coal from trucks, stores it and then an endloader loads it to trucks for transport to the prep plant			N
OS-2 (32S)	C 1980	Raw Coal Open Storage Pile - 39,000 ton maximum - receives raw coal from trucks, stores it and then an endloader loads it to trucks for transport to the prep plant			N
OS-3 (33S)	C 1980	Raw Coal Open Storage Pile - 102,000 ton maximum - receives raw coal from trucks, stores it and then an endloader loads it to trucks for transport to the prep plant			N
OS-4 (34S)	C 1980	Raw Coal Open Storage Pile - 19,250 ton maximum - receives raw coal from trucks, stores it and then an endloader loads it to trucks for transport to the prep plant		5,000,000 combined	N
OS-5 (35S)	C 1980	Raw Coal Open Storage Pile - 52,750 ton maximum - receives raw coal from trucks, stores it and then an endloader loads it to trucks for transport to the prep plant			N
OS-6 (36S)	C 1980	Raw Coal Open Storage Pile - 41,250 ton maximum - receives raw coal from trucks, stores it and then an endloader loads it to trucks for transport to the prep plant			N
OS-7 (37S)	C 1980	Raw Coal Open Storage Pile - 216,500 ton maximum - receives raw coal from trucks, BC-M1 and BC-2A (see Portable Crushing Unit below), stores it and then an endloader loads it to trucks for transport to the prep plant			N
BC-M1 (44S)	C 2007	Belt Conveyor - receives raw coal from a deep mine belt and transfers it to OS-7	450	1,752,000	N
		Portable Crushing Unit		_	_
HP-1	C 2005	Top Fed Hopper - 15 ton maximum capacity - receives raw coal from an endloader and drops it to BC-1A	300	2,630,000	PE
BC-1A (2SA)	C 2005	Raw Coal Conveyor - receives raw coal from the Hopper and transfers it to PC-1	300	2,630,000	N
PC-1 (1SA)	C 2005	Portable Crusher - receives raw coal from BC-1A, crushes it and then drops it to BC-2A	300	2,630,000	FE
BC-2A (3SA)	C 2005	Raw Coal Conveyor - receives sized raw coal from PC-1 and transfers it to OS-7 (see Remote Raw Coal Stockpiles above)	300	2,630,000	N
		Raw Coal Circuit			

Equipment ID #	Date of Construction, Re-Construction or Modification	Emission Unit Description	Design Capacity		Control
			ТРН	TPY	Device(s) ¹
BS-1 (18S)	C 1980	Raw Coal Truck Dump Bin No. 1 - 75 ton capacity - receives raw coal from trucks and drops it to BC-1		5,000,000 combined ³	PE
BC-1 (1S)	M 2007 C 1980	Raw Coal Conveyor - receives raw coal from BS-1 and transfers it to BS-7	700	5,000,000	PE
BS-7 (24A)	C 1980	Raw Coal Silo No. 1 - 2,000 ton capacity - receives raw coal from BC-1 and BC-18, stores it and then drops it to BC-4 (see below)	700 combined ⁴	5,000,000 combined ⁴	FE
BS-2 (19S)	C 1980	Raw Coal Truck Dump Bin No. 2 - 75 ton capacity - receives raw coal from trucks and drops it to BC-17 or BC-2	571 combined ³	5,000,000 combined ³	PE
BC-17 (45S)	C 2007	Raw Coal Conveyor - receives raw coal from BS-2 and transfers it to BS-4 (see below)	600	5,000,000	PE
BC-2 (2S)	M 2007 C 1980	Raw Coal Conveyor - receives raw coal from BS-2 and transfers it to BC-18 or BS-6	700	5,000,000	PE
BC-18 (46S)	C 2007	Raw Coal Conveyor - receives raw coal from BC-2 and BC-3 and transfers it to BS-7	600	5,000,000	PE
BS-6 (23S)	C 1980	Raw Coal Silo No. 2 - 2,000 ton capacity - receives raw coal from BC-2, stores it and then drops it to BC-4	700 combined ⁴	5,000,000 combined ⁴	FE
BS-3 (20S)	C 1980	Raw Coal Truck Dump Bin No. 3 - 75 ton capacity - receives raw coal from trucks and drops it to BC-3	571 combined ³	5,000,000 combined ³	PE
BC-3 (3S)	M 2007 C 1980	Raw Coal Conveyor - receives raw coal from BS-3 and transfers it to BS-5	700	5,000,000	PE
BS-5 (22S)	C 1980	Raw Coal Silo No. 3 - 2,000 ton capacity - receives raw coal from BC-3, stores it and then drops it to BC-4	700 combined ⁴	5,000,000 combined ⁴	FE
BS-13 (30S)	C 1980	Raw Coal Dump Bin for Rail Car Shakeout - 150 ton capacity - receives raw coal from rail cars and drops it to BC-14	600	5,000,000	FE
BC-14 (14S)	M 2007 C 1980	Raw Coal Conveyor - receives raw coal from BS-13 and transfers it to BC-15		5,000,000	PE
BC-15 (15S)	M 2007 C 1980	Raw Coal Conveyor - receives raw coal from BC-14 and transfers it to BS-04		5,000,000	PE
BS-4 (21S)	C 1980	Raw Coal Silo Rail Car Shakeout - 500 ton capacity - receives raw coal from BC-15, stores it and then drops it to BC-4	600	5,000,000	FE
BC-4 (4S)	M 2007 C 1980	Raw Coal Conveyor - receives raw coal from BS-7, BS-6, BS-5 and BS-4 and transfers it to SC-1 or BC-13 (see Clean Coal Circuit below)	700	5,000,000	PE
SC-1 (47S)	C 2010	Stationary Raw Coal Screen - receives raw coal from BC-4, scalps off the large pieces to CR-1 and drops the rest to BC-19	700	5,000,000	FE
BC-19 (48S)	C 2010	Raw Coal Conveyor - receives sized raw coal from SC-1 and transfers it to BC-5	700	5,000,000	PE
CR-1 (17S)	C 1980	Rotary Breaker - receives oversize raw coal from SC-1, crushes it and then drops it to BC-5 and the refuse to BC-6 (see Refuse Circuit below)	800	5,000,000	FE
BC-5 (5S)	M 2007 C 1980	Sized Coal Conveyor - receives sized raw coal from CR-1 and BC-19 and transfers it to the wet wash circuit	700	5,000,000	PE
		Clean Coal Circuit	<u>-</u>	-	-
BC-8 (8S)	M 2007 C 1980	Clean Coal Conveyor - receives clean coal from the wet wash circuit and transfers it to BC-9 or BC-12	450	4,000,000	PE

Equipment ID #	Date of Construction, Re-Construction or Modification	Emission Unit Description	Design Capacity		Control
			ТРН	TPY	Device(s) ¹
Sampler (41S)	C 1980	Clean Coal Sampler - receives clean coal from BC-8, analyzes it and drops it back to BC-8		1,007,400	FE
BC-9 (9S)	M 2007 C 1980	Clean Coal Conveyor - receives clean coal from BC-8 and transfers it to BS-10 or BC-10	450	4,000,000	PE
BS-10 (27S)	C 1980	Clean Coal Silo No. 1 - 4,000 ton capacity - receives clean coal from BC-9, stores it and then drops it to BC-11		4,000,000	FE
BC-10 (10S)	M 2007 C 1980	Clean Coal Conveyor - receives clean coal from BC-9 and transfers it to BS-11		4,000,000	PE
BS-11 (28S)	C 1980	Clean Coal Silo No. 2 - 4,000 ton capacity - receives clean coal from BC-10, stores it and then drops it to BC-11	450	4,000,000	FE
BC-11 (11S)	M 2007 C 1980	Clean Coal Conveyor - receives clean coal from BS-10 and BS-11 and transfers it to BC-12	1,000	5,000,000	PE
BC-12 (12S)	M 2007 C 1980	Clean Coal Conveyor - receives clean coal from BC-8/Sampler and transfers it to BS-12	1,000	5,000,000	PE
BS-12 (29S)	C 1980	Clean Coal Loadout Bin - 75 ton capacity - receives clean coal from BC-12 and then drops it to rail cars		5,000,000 in 4,630,000 out	FE
OS-8 (38S)	C 1980	Clean Coal Open Storage Pile - 326,000 ton maximum - receives clean coal from trucks and it is reclaimed by an endloader to BS-14		630,000	N
BS-14 (43S)	C 1980	Clean Coal Storage Bin - 75 ton capacity - receives clean coal from trucks and an endloader and drops it to BC-16		630,000	PE
BC-16 (16S)	M 2007 C 1980	Clean Coal Conveyor - receives clean coal from BS-14 and transfers it to BC-13		5,000,000	N
BC-13 (13S)	M 2007 C 1980	Clean Coal Conveyor - receives clean coal from BC-16 and transfers it to BS-12 (see above)	600	5,000,000	N
		Refuse Circuit			•
BC-6 (6S)	M 2007 C 1980	Refuse Conveyor - receives refuse from CR-1 and transfers it to BC-7	200	2,000,000	PE
BC-7 (7S)	M 2007 C 1980	Refuse Conveyor - receives refuse from the wet wash circuit and BC-6 and transfers it to BS-9	400	3,500,000	PE
BS-8 (25S)	C 1980	Lime Bin - 100 ton capacity - receives lime pneumatically loaded from trucks and drops it to BC-7		2,200 out	FE
BS-9 (26S)	C 1980	Refuse Bin - 500 ton capacity - receives refuse from BC-7, stores it temporarily and then loads it into trucks for transport to the refuse disposal area		1,002,200	FE
OS-9 (42S)	C 1980	Refuse Open Storage Pile - 1,000 ton maximum - receives refuse from a chute off of BS-9, stores it and then it is reclaimed by an endloader to trucks for transport to the refuse disposal area		1,002,200	N

In accordance with 40 CFR 60 Subpart Y, coal processing and conveying equipment, coal storage systems, and coal transfer and loading systems constructed, reconstructed, or modified on or before April 28, 2008 shall not discharge gases which exhibit 20 percent opacity or greater. Coal processing and conveying equipment, coal storage systems, and coal transfer and loading systems constructed, reconstructed, or modified after April 28, 2008 shall not discharge gases which exhibit 10 percent opacity or greater. For open storage piles constructed, reconstructed, or modified after May 27, 2009, the permittee shall prepare and operate in accordance with a fugitive coal dust emissions control plan that is appropriate for site conditions.

FE - Full Enclosure; PE - Partial Enclosure; ST - Stacking Tube; WS - Water Sprays; N - None.

The maximum hourly and annual throughputs for BS-1, BS-2 and BS-3 combined are 500 TPH and 5,000,000 TPY.

⁴ The maximum hourly and annual throughputs for BS-5, BS-6 and BS-7 combined are 700 TPH and 5,000,000 TPY.

SITE INSPECTION

Mike Kolb of the DAQ's Compliance and Enforcement Section performed an full-on site targeted inspection on November 20, 2008. The facility was found to be in compliance at the time of the inspection.

Directions from Iager, WV are to travel west on US-52, turn left onto County Route 1 at Johnnycake heading toward Panther State Park, turn right onto War Branch (County Route 1/5) and the plant entrance will be approximately 0.2 miles on the left with the facility adjacent to County Route 1/5.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Fugitive emission calculations for continuous and batch drop operations, transfer points, crushing and screening, storage piles, and paved and unpaved haulroads are based on AP-42 Fifth Edition "Compilation of Air Pollution Emission Factors", Volume 1. Control efficiencies were applied based on "Calculation of Particulate Matter Emission - Coal Preparation Plants and Material Handling Operations." The emission factors for crushing/breaking and screening operations were obtained from the Air Pollution Engineering Manual - Air & Waste Management Association - June 1992. The calculations were performed by the applicant and were checked for accuracy and completeness by the writer. The increase in emissions calculations were performed by the writer.

The proposed modifications will result in an increase in the potential to discharge controlled emissions of 0.61 pounds per hour and 2.17 TPY of particulate matter (PM), of which 0.29 pounds per hour and 1.02 TPY will be particulate matter less than 10 microns in diameter (PM $_{10}$). See the attached G10-C Excel spreadsheet for a summary of the change in emissions.

The proposed modification will result in the following new estimated potential to discharge controlled emissions:

New Facility Emissions Summary - Litwar Processing Company, LLC	Controlled PM Emissions		Controlled PM ₁₀ Emissions		
R13-2471B	lb/hour	TPY	lb/hour	TPY	
	Fugitive Emissions				
Stockpile Emissions	5.36	23.48	2.52	11.03	
Unpaved Haulroad Emissions	75.19	90.58	19.40	23.37	
Paved Haulroad Emissions	0.00	0.00	0.00	0.00	
Fugitive Emissions Total	80.55	114.05	21.92	34.40	
	Point Source Emissions				
Equipment Emissions	4.11	15.65	1.93	7.36	
Transfer Point Emissions	5.47	15.57	2.59	7.36	
Point Source Emissions Total (PTE)	9.58	31.22	4.52	14.72	
FACILITY EMISSIONS TOTAL	90.14	145.27	26.44	49.12	

REGULATORY APPLICABILITY

NESHAPS and PSD have no applicability to the modified facility. The proposed modification of Litwar's wet wash coal preparation plant and railcar loadout facility is subject to the following state and federal rules:

45CSR5 To Prevent and Control Air Pollution from the Operation of Coal Preparation Plants, Coal Handling Operations and Coal Refuse Disposal Areas

The facility is subject to the requirements of 45CSR5 because it meets the definition of "Coal Preparation Plant" found in subsection 45CSR5.2.4. The facility should be in compliance with Section 3 (less than 20% opacity) and Section 6 (fugitive dust control system and dust control of the premises and access roads) when the particulate matter control methods and devices proposed are in operation.

45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation

The proposed modification is subject to the requirements of 45CSR13 because it will involve the construction of a stationary screen and conveyor subject to 40 CFR 60 NSPS Subpart Y revised on April 28, 2008 and then again on May 27, 2009. The applicant has submitted an application for a modification permit. The applicant published a Class I legal advertisement in *The Industrial News* on June 9, 2010 and submitted \$1,000 for the application fee and \$1,000 for the NSPS fee.

45CSR16 Standards of Performance for New Stationary Sources 40 CFR 60 Subpart Y: Standards of Performance for Coal Preparation and Processing Plants

This facility is subject to 40 CFR 60 Subpart Y because it was constructed and will be modified after October 24, 1974 and will process more than 200 tons of coal per day. The proposed modification includes the addition of one stationary screen and one conveyor, which are defined as affected facilities in 40 CFR 60 Subpart Y. Therefore, the proposed modification is subject to 45CSR16, which incorporates by reference 40 CFR 60 Subpart Y - Standards of Performance for Coal Preparation Plants. The facility should be in compliance with Section 254(a) (less than 20% opacity for coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed or modified on or before April 28, 2008) and Section 254(b) (less than 10% opacity for coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, re-constructed or modified after April 28, 2008) when the particulate matter control methods and devices proposed are in operation.

In accordance with 45CSR30 Major Source Determination, the wet wash coal preparation plant and railcar loadout facility will continue to be a non-major source which is subject to NSPS Subpart Y. The facility's potential to emit will be 14.72 (point sources only) of a regulated air pollutant (PM_{10}) as defined in subsection 2.32, not including fugitive emissions from haulroads, which is less than the 45CSR30 threshold of 100 TPY. Therefore, the facility will continue to be subject to 45CSR30 and classified as a Title V deferred non-major source.

The proposed modification of Litwar's wet wash coal preparation plant and railcar loadout facility is <u>not</u> subject to the following state and federal rules:

45CSR14 Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration

In accordance with 45CSR14 Major Source Determination, the wet wash coal preparation plant and railcar loadout facility is not one of the listed sources under the definition of "Major Stationary Source" in subsection 2.43. The facility will have the potential to emit 54.70 TPY (point sources and open storage piles) of a regulated air pollutant (PM), not including fugitive emissions, which is less than the 45CSR14 threshold of 250 TPY. In accordance with subsection 2.4.3.d, this facility is not listed in Table 1, and so fugitive emissions are not included when determining source applicability. Therefore, the proposed modifications are not subject to the requirements set forth within 45CSR14.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

A toxicity analysis was not performed because the pollutants being emitted from this facility are PM (particulate matter) and PM_{10} (particulate matter less than 10 microns in diameter), which are non-toxic pollutants.

AIR QUALITY IMPACT ANALYSIS

Air dispersion modeling was not performed due to the size and location of this facility and the extent of the proposed modifications. This facility is located in McDowell County, WV, which currently is in attainment for all regulated air pollutants.

MONITORING OF OPERATIONS

The coal handling equipment and storage areas should be observed to make sure that the facility is meeting the applicable visible emission standards. In accordance with 45CSR5 and 40 CFR 60.254(a), all emissions from coal processing and conveying equipment, coal storage system,

or coal transfer and loading system processing coal constructed, re-constructed or modified on or before April 28, 2008 should be less than 20% opacity. In accordance with 40 CFR 60.254(b), all emissions from coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, re-constructed or modified after April 28, 2008 should be less than 10% opacity.

For the purpose of determining compliance with the maximum throughput limits, the permittee shall maintain certified monthly and annual records of the amount of coal processed, utilizing the form identified as Appendix A to Permit R13-2471B. In addition, the company shall maintain a certified monthly record of the amount of the usage of the water truck and amount of water applied, utilizing the form identified as Appendix B to Permit R13-2471B. Also, the facility shall perform visible emission checks and opacity readings as specified, utilizing the form identified as Appendix C to Permit R13-2471B. Such records shall be retained onsite by the permittee for at least five (5) years. Certified records shall be made available to the Director or his duly authorized representative upon request.

CHANGES TO CURRENT PERMIT R13-2471A

 Addition of a single deck stationary coal screen SC-1 and associated conveyor BC-19 with maximum throughputs of 700 TPH and 5,000,000 TPY

RECOMMENDATION TO DIRECTOR

The information contained in this permit application indicates that compliance with all applicable regulations should be achieved when all of the proposed particulate matter control methods are in operation. Due to the location, nature of the process, and control methods proposed, adverse impacts on the surrounding area should be minimized. Therefore, the granting of a permit to Litwar Processing Company, LLC for the modification of their existing wet wash coal preparation plant and railcar loadout facility located near Iaeger, McDowell County, WV is hereby recommended.

Daniel P. Roberts, Engineer Trainee NSR Permitting Section

August 9, 2010

Date